Industrial Finishing

Reg. U. S. Pat. Off.

An Independent Publication Devoted to the Finishing of Industrial Products

Vol. VIII, No. 4 **FEBRUARY, 1932** **$2.00 a Year**

Contents of this Issue

From the Editor's Desk 5

Feature Articles

The Why of Standard Trade Colors, by David Smart, Jr. 7
Designs, Colors and Finishes at New York's Automobile Show, by G. D. Hirst 9
Clear and Color Finishes on Aluminum—The Alumilite Process, by Ralph E. Pettit 12
Furniture Show Finishes, by R. G. Meade 15
Refinishing Antique Furniture, and Copies of Antiques, by R. B. Altenburg 20
"Questions and Answers" Section 24
New Materials and Equipment 35
Bake-Finishing Pressed Steel Automotive Parts, by J. B. Nealey 42
Mechanical Stripers, by P. C. Bardin 48

"Questions and Answers" Section 24

"New Materials and Equipment" Section 35

Crown Spray Gun 35
Sprays from Tire Pressure 35
Compressor Air Filter 36
Sample Storage Box 36

"Metal Finishing" Section 42

Short Articles

Bright Colored Bridge Sets 8
Business Improved 8
What Makes Things Better 11
Rubbing Operations 14
"Walac" Architectural Lacquer 18
Airplane Finishing Specifications 18
Useful Interior Periscope 30
W. A. Green to Represent Paasche in Texas 30
Striping Materials 40
Automobile Show Finishes 46
Maintenance Painting 56
"The Consulting Chemist and Your Business" 56
Hilo Elects Officers 56
Letters 57
Salesmen; Samples; Schedules 57
Finishes in Japan 57
Lint from Overalls 58
Likes Stain-Filler 58
Paasche Air Finishing Eng. in Mass. 58
Color Card Expert Honored 58
Aluminum Paint 59
Chas. B. Chrystal Co. Moves 59
Geo. E. Watson's New Catalog 59
Furniture Styles; Walnut 62
Industrial Service Organization 62

Editorial 60

"Classified Advertising" Section 62

Advertisers' Index 63

Copyright 1932

Published by PRACTICAL PUBLICATIONS, INC., 802 Wulsin Bldg., Indianapolis, Ind.

Eastern Representative—C. A. Larson
254 West 31st St., New York
Phone, Penna. 9049

Western Representative—H. L. Watrous
611 Wrigley Bldg., Chicago
Phone, Superior 2429

Now —

an absolutely

100% alcohol-proof

LACQUER

DESIRABILITY becomes a reality! Another dream of perfection, among finish consumers, is now actually realized in UTWAY LACQUER, which is 100% proof against alcoholic liquids of any strength—an outstanding achievement of great practical value.

100% alcohol-proof UTWAY LACQUER now makes it possible to absolutely guarantee your products against damage, not only from alcohol of any strength, but also from practically all other solutions common to Households, Hotels, Clubs, Offices, etc.

Even scalding hot water or extremely hot dishes may come in direct contact with 100% alcohol-proof UTWAY LACQUER surfaces without effect.

In appearance, it is equal to the finest and it becomes more impervious with age. Investigate now, because it affords you the one opportunity to stimulate sales.

UTWAY

DOUBLE INDEMNITY
LACQUER
100% PROOF
AGAINST ANY STRENGTH
ALCOHOL

Write us for details

Utley Products Sales Co.

Gen'l. Offices, 318 W. RANDOLPH STREET, CHICAGO, ILLINOIS

From the Editor's Desk

THE majority of us are interested in automobiles and furniture, and of course, we are intensely interested in what's new in these lines. New designs, new colors and new finishes were on exhibition at the January Automobile and Furniture Shows, and INDUSTRIAL FINISHING'S special correspondents tell you about them in this issue.

Red, White and Blue

A SIGNIFICANT suggestion about the key to what's popular and appropriate in general color decoration this year is made by another of our New York correspondents who calls attention to the influence of the Washington Bicentennial Celebration this year. She says:

"The tricolor, red, white and blue, is decidedly the vogue now; it affords a striking color combination which can now be smartly worked out in decoration. In several of the rooms in the new Waldorf-Astoria, the world's largest and smartest hotel, this color key has been worked out in a delightful manner. And now one of the leading decorators in New York City has just opened a very elegant display bedroom in which red, blue and white predominate.

"This combination does not necessarily call for the clear brilliant colors of the American flag in all cases. The red, for example, may be a light red or a bright orange red, or it may be rose red, tomato red or cherry red. The blues may range from light pastels to navy, with royal blue much in favor, as is also a new dull shade with a grayish quality called 'cadet' or West Point blue. Even the white may have a grayed or a beige tinge, or some other tinge.

"Variations of all three colors may be evolved, using subtle offshades of the basic colors. Or much more of any one of the three colors may be used while the other two appear only in slight degree as incidental colors to the scheme of decoration."

Finishes Chemically Applied

WE are all familiar in a general way with several methods of applying finishes and color mechanically—by brushing, flowing, dipping, tumbling, spraying—but chemical and electrochemical methods of application are also becoming a factor in certain lines of industrial finishing. Some enlightening information along this line is revealed in Mr. Pettit's article in this issue, wherein he tells about the Alumilite Process of applying clear and color finishes on aluminum.

R. K. Rohr

Managing Editor

Go To The Bottom!

. . . and get the real facts on spray-finishing costs. Industrial finishers, after long experience over many years, know the danger of experimenting with new and untried spray-finishing methods. They know that facts,—proven facts—are the only safe guide in selecting equipment; that is why DeVilbiss Spray-finishing Equipment is specified for Finishing Rooms everywhere. Investigate thoroughly, then base your judgment on the facts. You will find that DeVilbiss Equipment is not bought just because DeVilbiss is the leader in the field but it is bought because of the sound design, outstanding workmanship and material and high practical efficiency, which makes that leadership possible.

For the sake of your Profit and Loss Statement, send for the DeVilbiss man when any spray-finishing equipment is being considered. Or write.

THE DeVILBISS COMPANY
TOLEDO, OHIO

New York Philadelphia Cleveland Detroit Chicago St. Louis Los Angeles San Francisco Windsor, Ontario

Direct sales and service representatives available everywhere

The wide and comprehensive experience of DeVilbiss engineers in designing special automatic and semi-automatic equipment is available to meet any new and unusual finishing requirements in your plant.

DeVilbiss

The Why *of* Standard Trade Colors

by DAVID SMART, JR.

Advertising Manager
Shell Oil Company
(Central Division)

HAS it ever occurred to you why several important industries have adopted certain colors as a standard, to endeavor to make their particular business stand out as apart and distinct from others in the same field? The purpose of this article is to show, in part, some of the reasons why our company has adopted red and yellow as its standard. It is necessary therefore to start with some consideration of the sources of color and the human reaction thereto.

The production of color is dependent upon light, and in the absence of light nothing can be colored. Color in itself is entirely an abstraction and has no tangible existence. Since color is dependent upon various rays reflected from white light, it may be easily understood that all objects appear colorless in the dark, and what would appear to be a beautiful object in the light is only a colorless mass in the dark. So much for the theory of color.

The substance we call yellow or red is merely one which has the property of absorbing from white light all the constituents excepting yellow or red. These yellow or red rays are reflected, and it is this reflection which gives us the sensation that we accept as a yellow or red color. Black is thus derived because of the substance absorbing all the light rays.

Let us now consider colors from a psychological standpoint and their effect upon people and surroundings. It is a well known fact that scientists are using colors in connection with health work in hospitals and insane asylums, and that color is now entering into our daily life in many ways. We can all remember the days when it was a daring woman who wore bright colored apparel, but since that time we have realized more and more the benefit to both feelings and health from the use of bright cheerful colors.

For instance, several years ago practically all bedroom furniture was dark in color, massive in structure and uninviting in appearance. This phase was followed by the highly polished brass beds which in turn were improved upon and followed by furniture tinted and finished in warm lovely shades. Since these newer shades were not fully effective upon the massive types, they in turn were changed to lighter construction until today, because of the use of color, we have bedroom furniture

of many diversified shades of color. So, in this specific instance, color has improved and benefited thousands of homes.

But before a color is decided upon as a standard it is not sufficient that it be pleasing to the eye at the moment. A great deal of thought must be given to the psychological effect of this color. All colors may be classified and segregated into two groups—namely, warm and cold colors. Reds, yellows and orange come under the warm group, while green, blue and violet come under the cold group. Under the same classification the latter are the receding colors while red, orange and yellow are warm, vivid and outstanding.

An excellent example of this is a field of yellow poppies which attracts attention above all surrounding colors, and which holds the eye for a great distance. In the same way the bright red roof of a farmhouse is discernible for many miles. Opposed to this, the cold colors recede in the background and fail to impress the eye of the beholder with any outstanding effect.

Scientists have proved that each color creates certain psychological reactions. We look upon white as a symbol of cleanliness. Green denotes victory and freshness. Blue denotes depth and restfulness. Yet, too much of this color is apt to react upon a person and give them the so-called "blues." Violet denotes distance and loneliness and too much of this color will bring on a state of morbidity.

Red is the color with personality, and exemplifies life, fire and vitality. Yellow is the color of carnival, happiness, hospitality and sunlight.

Naturally it follows that the points to be considered in choosing either a trade color, or one in production which stands out prominently with advertising value, are visibility, personality and practicability. If space permitted, much could be said on the prominent points of these three features and upon their effects as a business stimulant when properly chosen, but since space is limited it must be sufficient to state that a business which is dormant in part because of the use of cold colors, may perhaps be stimulated to an unsuspected degree by a change to those of warmer type.

Bright Colored Bridge Sets

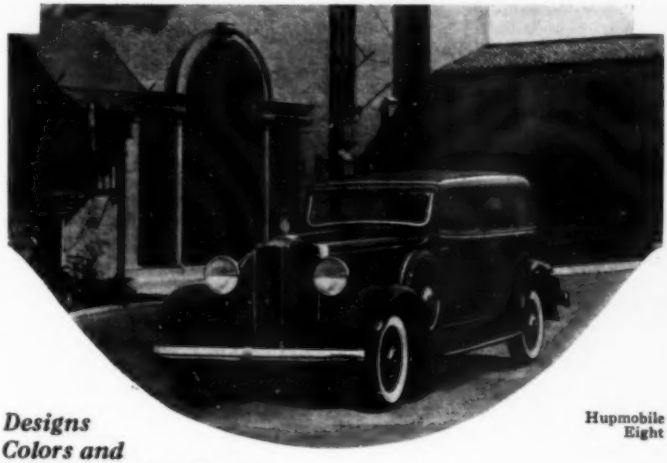
Bright colors in bridge sets help to make the bridge game more interesting; they put pep and sparkle into the game. Card sets today are to be seen in all colors, with red, blue, black and green in the lead for popularity. Some of the tables are plain, while others are ornamented with unusual designs and figures.

Chairs are now built for comfort in these card table sets. Some of them are upholstered, but all are built the right height for comfort and to give the correct posture while players enjoy their favorite game.

Bridge tables are now made to serve a two-fold purpose; they make excellent screens for the fireplace when not in use as tables, especially those having an ornamental top.—A. J. O.

Business Improved

Mr. J. H. Kalte, manager of the High Point plant of The Stille-Young Corporation, has been spending several days at the main office in Chicago. He reports an improvement in conditions throughout the southeastern territory and an encouraging outlook for the coming season.



Hupmobile Eight

Designs Colors and Finishes at New York's

Automobile Show

by G. D. HIRST

COLOR, perennially interesting, ran riot in the New York Automobile Show at the Grand Central Palace. Black has fallen somewhat in popularity. If bright colors can help the psychology of the American people, the automobile manufacturers have done their best. There never was such a display of colors in a motor show.

This year a real ensemble effect has been obtained, and almost for the first time cars give the impression of having been conceived as a whole. The effect of a lot of external accessories having been added at the last minute has nearly completely disappeared. Last year we saw the beginning of this movement with the design of special hardware—particularly noticeable in the door handles which were made to blend with the design instead of conspicuously sticking out. This year the effect has been carried very much further, due possibly to the wide publicity that has been given to the so-called "tear-drop" design and the desire for more streamlining.

Streamlining has an important and obvious influence on external finishing. Now even such necessary externals as lamps are being carefully engineered and finished into the design and general color

scheme. The same is true of the radiator. There is less chromium and more of the color finish of the car itself on these externals. Fenders now conceal unsightly under-chassis details.

Pierce-Arrow cars exhibited at the Show revealed much color. A sport phaeton was a sort of a rose-rust straw color, with fenders brown and stripes rose-rust split with blue. A club-sedan was yellow, with fenders black. Brougham and coupe were medium green and light blue respectively, with variegated color stripes.

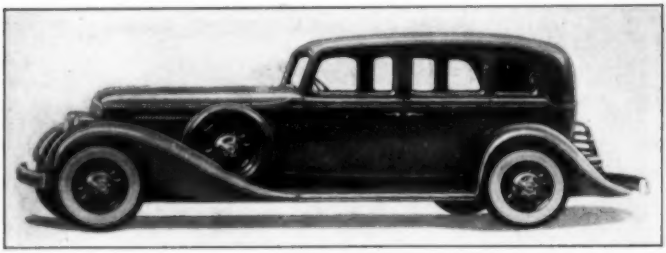
Hudson showed cars in brilliant green, blue, brown, cream and perlescent red. There you have a representative example of how manufacturers feel about color! Essex showed new models in green, blue and brown. Studebaker featured green, blue, brown. Practically all Studebaker wheels were chromium. Cord showed a sedan in pearl. Two Cord phaetons were light green and sand color. Auburn took pride in an effective - looking gun metal brougham. Its speedster was old ivory.

Blue is expected to be the color most in demand. Green was a mighty close second in importance—a wide variety of greens. Brown was third, the light values being featured chiefly. A large representation of gray color is worthy of note. Few maroons were in evidence. Yellows and creams appear to have lost considerable favor of late as open-car colors.

Chevrolet showed in beige, gray, blue, black and green; Pontiac in blue, maroon and green. An eight-cylinder Oldsmobile comes in a garnet-maroon. A La-Salle sedan is similarly colored.

Solomon in all his glory was not arrayed such as these. The same trend runs throughout the show.

Upholstery tends towards the lighter and more delicate textures. Broadcloth, whipcord and mohair are prominent. In the higher priced field the lighter shades and finer textures predominate, making really beautiful creations.



The Graham eight—a bold departure from conventional body design. Note the streamlining; The ensemble gives a new impression of unity. There is a studied omission of exterior accessories and a systematic concealment of units that would detract from the smoothness of its flowing contours. Chromium is conspicuously absent; even the headlamps are in color. Radiator grill and the hub caps are the only units showing an extensive use of chromium plate. The air-foil fenders, with deep side valances, give a pleasingly new line of grace and effectually conceal the working parts of the under carriage. Some of the Graham cars are finished in pearl essence lacquer which gives a strikingly attractive effect.

More and more the body designer, the finisher and the interior decorator are cooperating for beauty's sake. Instrument panels and other interior woodwork are often of richest mahogany and walnut (genuine or metal finished to imitate these fine woods). Leathers for upholstering in soft, rich colors are still the vogue in the sportsters, speedsters and other open and convertible types.

One model, an open high-priced type, has a folding table affixed to the rear of the front seat. There is a concealed light on either side convenient for seeing the backgammon counters, when the journey gets tiresome.

It seems the lesson to be learned by industrial finishers and manufacturers from the automobile show is that color should be used courageously. Perhaps this is a subconscious reaction from the drab realities. Color undeniably has a stimulating effect on the spirits. Perhaps students in psychology have a real contribution to make to industry during these perilous days. The 32nd Automobile Show points that way.

According to information released by the Duco color advisory service of the Du Pont Co., the appearance of cars from the color angle at this year's show was characterized by a greater refinement of detail than has ever before been attempted in production. Wire wheels have been adroitly two-toned to secure more subtle color proportion or balance; a greater number of fenders have been colored to complete the harmony of the body colors; lamps, the under side of fenders and radiator shells have been colored to an extent never before attempted, in an effort to engender 1932 models with the greatest possible amount of eye appeal.

Pearl essence, incorporated with clear lacquer, and the resultant mixture tinted with any ground color over which it may be applied, was first introduced as an automobile finish at the New York Automobile Salon in 1927. Since that time, interest in the iridescence, depth and luster which is imparted to automotive finishes formulated to embody this silvery substance has advanced to the point where its use as an automobile production finish has been deemed advisable by several car manufacturers. A number of cars this year are very attractively finished in pearl essence lacquer.

What Makes Things Better

When we stop to think about it, the remarkable progress that is being made industrially is not due to any wonderful intelligence on the part of one man, or on the part of any particular group of men. Rather it is the bright idea of "Billings," coupled with those of "Johnson" and "Timmons," and modified a little by the timely intervention of "White," that give us a workable scheme along some particular line.

Take finishing ovens or industrial ovens in general as a case in point: Their remarkable advances have not been altogether due to oven builders proper. Many others contribute to the building of modern ovens. For instance, there has been developed a combination of thermostat and circuit breaker which will control the heat of an oven up to 600° F., and the device consumes no current except at the moment when it makes or breaks connection.—H. J. E.

Clear and Color Finishes on Aluminum

The Alumilite Process

by RALPH E. PETTIT

The Alumilite process, developed by the Aluminum Colors, Inc., consists of making aluminum or aluminum alloys the anode in a bath of proper composition and controlling the electrolyte temperature, voltage, and current density within prescribed limits for a certain time period.

THE Alumilite treatment produces on the surface of the aluminum, or aluminum alloy article, an oxide film which is very resistant to corroding influences, although under severe conditions the film will eventually break down. The alumilite film is extremely hard and in this respect resembles corundum which is crystallized alumina. Comparative tests run on a Camp abrasion testing machine show the film to be more resistant to abrasion than chromium plate. Another valuable property of the film is its strong affinity for certain types of organic and inorganic coloring compounds which are readily absorbed within the body of the film.

Modernistic ideas in color and design are steadily increasing, and the use of aluminum for decorative purposes is becoming more popular.

The colored alumilite coating offers unusual possibilities in color and design because of the striking contrast between the silvery aluminum color and black or the strong colors. Pastel shades can also be produced on the alumilite film when the film is formed on the proper aluminum alloys. It is true that the use of paints, lacquers and enamels offer many pleasing effects on aluminum, but the dyed alumilite film offers a durable and ornamental finish that is distinctly different and is in keeping with the modern trend of individuality.

In addition to its remarkable resistance to corrosion and its abrasive strength, the alumilite film offers considerable resistance to the passage of an electrical current. Laboratory tests show a film breakdown at a potential of 500 volts of electricity.

As the alumilite film is formed by chemical and electro-chemical reactions between the aluminum surface and the constituents of the electrolyte, and not deposited

from solution as in the electrodeposition of metallic coatings, the film is intimately a part of the aluminum and will not chip or flake off from the underlying aluminum surface. With a color penetration the depth of the alumilite film, much wear and abuse will be withstood before the aluminum surface is exposed.

By the proper control of the operating conditions, such as bath composition and current density, the flexibility of the film can be greatly increased without seriously disturbing the corrosion resisting qualities. However, where corrosion resistance is paramount, a hard, less flexible film is recommended. The properties of this flexible film are such that it is entirely commercial to coat and color aluminum sheets and then fabricate the sheets for various purposes.

A machine has been developed for continuously coating and coloring coiled aluminum sheets, ribbon and wire. The sheet in coils containing approximately 700-ft., and in commercial widths, is continuously fed through the various treatment steps and discharged in either the plain or colored alumilite finish. The finished sheet may be either run off in coils for future fabrication, or it may be fed directly to the press for forming. Such articles as bottle tops, buttons, and moulding are readily formed from the treated sheet without injury to finish.

At the present time sufficient data are not at hand to definitely state the serviceability of the colored film for outdoor exposure. It is known that certain of the organic base dyes are quite susceptible to fading when exposed to the weather, while others are more resistant and may be used for exterior use. For interior work, the dyes now used commercially are quite permanent. Four colors, of a mineral base have been developed which are commercially light fast.

Among the many aluminum articles found in the natural alumilite finish are: ice-cube trays and grids, mouldings, fan blades, wire, dairy equipment, baking equipment, hooks, valves, garden implements, file guides, pneumatic conveyor tubes, and fishing equipment.

The colored alumilite film offers much on such articles as: poultry leg bands, buttons, bottle tops, name plates, compacts, beads, flashlight cases, gauge dials, smokers' articles, switch plate, towel racks, optical goods, motor housings, brush backs and cooking utensils.

The natural alumilite finish when formed on commercially pure aluminum, or some of the aluminum alloys, has a pleasing opaque silvery color. Certain aluminum alloys, particularly the aluminum-silicon alloys take a dark gray to black alumilite film. By highlighting, some very pleasing effects can be obtained, contrasting the dark alumilite film against the natural aluminum surface. This type of finish finds considerable favor in the architectural field.

The operation of the alumilite process is similar to electroplating. It is recommended that the work is buffed before processing. After the polishing operation, the work is carried through a hot caustic cleaner to remove buffing dirt which is followed by a cold water rinse. The work is then ready for the alumilite bath, the

average treatment time being 20 minutes, although this time can be varied to meet special conditions. After treatment, the article is thoroughly rinsed in cold water and then carried over to the coloring vats. From three to ten minutes time is required to obtain proper color penetration, depending upon the depth of color required.

If the uncolored alumilite film is to be the final finish, a prolonged hot water rinse is recommended after the cold water rinse and the article allowed to dry. The colored alumilite film can be given added beauty with an oil wipe. If a matte finish is desired the aluminum surface should be roughened prior to the alumilite treatment.

The electrolyte used in the alumilite process is contained in a lead-lined tank equipped with a water jacket for cooling purposes. The solution is operated between 74° and 80° F. A 12-volt generator capable of delivering 15 amperes per square foot of surface area is recommended as a source of power.

There are a number of alumilite plants in operation throughout the country handling everything from aeroplane propellers to sewing thimbles.

Rubbing Operations

Proper rubbing of high-grade furniture is an important operation in the finishing room of every furniture plant. Where a high standard of finish is combined with large volume production at low production cost, the problem is one deserving considerable attention from superintendent and foreman.

In one furniture plant the finish included two coats of lacquer, and the rubbing operation was divided into two steps: First, air-operated rubbing machines were used with "wet-or-dry" sandpaper; and second, the product was finished by hand rubbing with pumice and water.

After careful study, the production standards shown in the accompanying table were developed and put into effect, covering these two operations. These standards were guaranteed against change so long as the method of performing the work remained unchanged. Results have been that employes are producing approximately 32% greater output, the quality of their work is more uniform, and they are earning about 20% more money than was previously paid to them.—C. F. Scribner, M. E., Industrial Engineer.

Production Standards for Rubbing

Square feet of area rubbed	Machine rubbing time, hours per 100 pieces	Hand rubbing time, hours per 100 pieces	Total time hours per 100 pieces
2 to 3	4.48	2.70	7.18
3 to 4	5.73	3.45	9.18
4 to 5	6.80	4.10	10.90
5 to 6	7.75	4.65	12.40
6 to 8	9.30	5.60	14.90
8 to 10	11.00	6.60	17.60
10 to 12	11.90	7.10	19.00
12 to 15	13.75	8.25	22.00

Some production standards which have been maintained in the finishing department.

Furniture Show Finishes

by R. G. MEADE

DURING the two weeks following the first Monday in January 1932, another exhibit was held at the Chicago Furniture Mart. Like its two predecessors it was essentially a price market—another demonstration of how much well constructed, well designed, and well finished furniture can be bought for astonishingly little money. Such a market does not, however, make for originality in color, design or finish. Instead prices are prominently guaranteed against decline, and as if in fear of giving offense to any taste, no particular trend is indicated unless it be toward an even more fixed conservatism.

It is as though the exhibitors had united in saying to the buyer: "We have offered you light colors and dark colors, period design, and modernistic, glossy luster and dull sheen, oak, walnut, mahogany, and rare fancy woods, plain surfaces and ornament beyond description; now we'll mark time until you tell us whatever it is you do want." The answer lies, of course, in the fact that almost every type of design, color and finish has a certain following. The buyer can but interpret as best he can the taste and financial condition of his particular city or section. Nevertheless it is undeniably a fact the public preference can and does show a change from year to year, and in a broadly national way.

Illustration at top of page shows a birch refectory table and chairs in Early American style—cherry color and flat lacquer finish made and shown by the St. John Table Co., Cadillac, Mich.

A Nationalistic Trend

It seems to me that a distinct movement is observable toward what may be termed "purely American" design and finishes.

It can be no coincidence that so-called Early American suites and pieces feature practically every space and that after a promising start, Jacobean Oak and French Provincial are fading from the picture, allied though they be in spirit.

WALNUT continues to dominate among woods offered in a design which for lack of a better term must be called "Modern American." In the higher priced lines it is shown in beautiful selections of crotch walnut, butt and burl, without further ornamentation, and has a soft dull-rubbed lacquer or varnish finish. In the cheaper lines it is the background for fancy woods, blended together, usually ash, Carpathian elm, rosewood or curly maple. It may also appear in sunburst, pencil stripe, or diamond-matched pattern with gum frames. No more shading is used than necessary to draw the various veneer colors together and the finish is generally a highly polished one.

MAPLE has succeeded in making a secure place for itself in a straight, unshaded finish with no red or yellow tone but rather the amber hue best described as "Honey." The designs are simple and the veneers show impartially a straight grained, curly or birds-eye figure. More work is seen polished than otherwise, although there is still much to be found dull rubbed and even waxed.

Occasional table in oak by Kiel Furniture Co., Milwaukee, Wisc. (American Furniture Mart Photo)

Oak Finished Darker

OAK has failed to advance beyond the bedroom and novelty field and is now finished quite dark with pigment wiping stain, shading lacquer, shellac and wax or flat lacquer. The stain tone is toward a dark walnut and the design is less purely Elizabethan and Jacobean than before, and more on plainer lines.

MAHOGANY has neither gained nor lost in popularity and it will, as always, have its own exclusive following. No attempt has been made to bring it out this year in new colorings, although a brown cast is still favored as against red. Crotch grain veneer is generally preferred for fronts, and the finish ranges from a high polish to a high eggshell. The styles are simple: Queen Anne, Duncan Phyffe and Georgian.

ENAMEL, despite the advent of durable lacquer finishes in color, appears unable to hold its own, and is shown less and less each year. This is despite some beautiful new pastel combinations of soft greens, grays, creams, and orchids, delicately vein-lined and smoke shaded. The memory of the old paint finishes, which chipped readily and could not be repaired without a complete refinish, seems to die hard with the public, and hence the dealer.

A carved treasure chest, by Caswell-Runyan Co., Huntington, Ind.

Bedroom Furniture

No particular designs or finishes are outstanding in this group although it is noticeable that Early American, usually spool or four-poster beds in maple and mahogany are represented in the majority of exhibits. A number of suites in Sleigh and Gondola (American Empire) were observed, one in birdseye maple but all others in red brown mahogany.

In the modern American styles, not of pure period origin, pencil stripe sunburst and shell effects remain popular. A succession of walnut veneer treatments in crotch served to bring out the fact that two-toning and shading are no longer in the same demand as formerly, even in cheaper lines.

Much the same tendency toward convention is to be seen in the metal groups where color is at a discount, and the limit of ingenuity in duplicating fancy veneers has evidently been reached. Plain walnut veneers with black trim and gold vein lines indicate the general tone of conservatism.

Dining Room Furniture

Emphasis in this field appears to lie in the depth and luster of finish so far as walnut is concerned, and walnut is by far the leading wood. The color is a pleasant shade neither light nor dark, reddish nor yellowish, and wholly free of shading. Trim woods are noticeably absent on the cabinet work and even overlays are sparingly used.

Duncan Phyffe and adapted Empire lead in mahogany and are also highly polished, but with less apparent depth to the finish due possibly to a more extensive use of lacquer. The color favors the brown side and outside of an occasional crotch overlay, the veneer figures are of the plainest. Oak in darker tones is still to be seen, but is no longer featured.

Early American suites are popular in the dinettes, chiefly in honey color maple, without shading and in dull flat varnish or lacquer finish. One outstanding suite called a "Cherry Finish" was birch stained a reddish brown, shaded and finished in semi-gloss lacquer. A few oak suites were seen in severe lines and dark or light and dark two-tone effects.

Living Room

Among the upholstered lines the last traces of modernistic have disappeared in favor of Early American maple and chintz effects, and straight overstuffed with little or no frame showing. Oak continues to be shown on the few highly carved frames, and there is some mahogany in polished reddish brown.

The smaller pieces have definitely gone Colonial in reddish brown maple and brown mahogany. Modernistic has fled from here too, along with bright colors, shading and profuse stenciling. A featured rocker chair called the "President Harrison" was of walnut, dark in color and dull in luster, and indicates that already an effort is being made to create a "Style" out of post Civil War times.

The cedar chests continue to follow whatever trend is noticeable in other lines, but display considerably more ingenuity and boldness in design, finish and decoration. One, featured as a "Treasure Chest," was of walnut, shaded almost black in dead flat finish, trimmed with brass studs and devoid of carving.

Porch and Breakfast Room

Design is still emphasized at the expense of finish in the porch and sun room lines which feature modernistic and tubular steel chromium plated. In materials, bakelite enamels have established themselves as the premier wear-proof finishes for outdoor furniture in colors.

Breakfast room suites show relatively little change from July, although oak is still the favored wood, with maple second. The former is finished in gray, green, brown, or yellow stain or lacquer backgrounds with black, orchid, brown and red stencil trim respectively. These schemes seem also favored for kitchen cabinets. Maple is stained a reddish tone of brown and is sometimes shaded and occasionally striped.

Special Demonstrations

A noteworthy feature of this market is the first appearance of spaces devoted to special demonstrations of materials. At least two carried interesting exhibits of lacquer finishes which were actively shown by repeated visible tests to be proof against such common enemies as hot water, alcohol, lemon juice, milk and hot plates.

There should be and will be a further extension of these valuable demonstrations, not merely for technical interest but as suggested window attractions for dealers whose windows are apt to lean too far toward the sedately conventional. The merchandising possibilities and eye appeal of greater emphasis on finish protection are tremendous.

"Walac" Architectural Lacquer

The Wabash Products Co., Terre Haute, Ind., has ready for distribution a new 3¾x6¾-in., 12-page booklet which describes "Walac"—a new and unique coating material for use on walls, ceilings and trim.

Airplane Finishing Specifications

A new booklet entitled "Airplane Finishing Specifications" has just been released by the Sherwin-Williams Co., Cleveland, Ohio. This booklet has 24 pages, 5¾x7¾-in.; it contains a color chart of the S-W Aero finishes, as well as an Airplane Finish Guide that is the result of an extensive survey. The booklet is conveniently indexed and gives instructive information on the application of finishes on planes, including dope finishes; it also reveals methods of testing as related to airplane fabric finishes.

The BEST GENERAL UTILITY LACQUER ON THE MARKET

METAL LACQUER #946

ON highly polished articles such as copper and brass, Zapon Metal Lacquer # 946 produces a brilliant and extremely tough finish. It contains maximum solids, allows maximum reduction, produces an excellent finish either by dipping or spraying, and is one of the most useful metal lacquers available.

ZAPON

The extensive facilities of our service laboratory are at your disposal without cost

"The Standard of Quality Since 1884"

THE ZAPON COMPANY

A Subsidiary of Atlas Powder Company

Stamford **Connecticut**

Refinishing Antique Furniture

and Copies of Antiques

by R. B. ALTENBURG

Manager of the Western Furniture Co., Kansas City, Missouri

REFINISHING antique furniture to bring out the mellow beauty of the old wood, and finishing copies of old models to give the effect of age requires that all details must be carefully watched—and most of the finishing must be done by hand.

In refinishing old pieces the removal of all old finish must be thorough. As a rule commercial varnish remover is sufficient to cut the old finish. Best results are obtained by applying a heavy coat of this to the article to be stripped, the same as if flowing on a coat of varnish. Sufficient time must be allowed to give remover time to penetrate and dissolve the old finish.

The next step is to apply more remover with a stiff stub brush, at the same time slightly rubbing the old finish with the brush and agitating it back into a liquid state. This operation requires speed, and where large pieces are being stripped it is advisable to treat only as much surface as can

No. 63 Production Lacquer is Alcohol-Resistant, but *Priced for Quantity Production*

NO. 63 Production Lacquer is not affected by ordinary solutions of alcohol, fruit acids, ammonia, submerging in water, or any of the usual tests for a good lacquer.

It is formulated for use on medium and low priced lines, and *priced so low that it places your finishing costs below average competition.*

No. 63 has good body, rubs easily, is free from grayish cast, and won't bloom or orange peel. Made in gloss or flat. In every way suitable for large-scale operation.

No. 63 Production Lacquer may save you $25 a drum or more. Right now, order five gallons at the drum price for trial. Satisfaction guaranteed or your money back.

Econo-Seal

The ideal first coater for production lacquer. Sands freely, extra heavy body, thins half and half with naphtha—*priced very low.* Five gallons for trial sent at the drum price.

JAMES B. DAY & CO.

CHICAGO

Lacquer, Sealer, Shellac, Stain, Enamel, Etc.

be washed immediately—before the remover evaporates and the finish becomes set again.

Enamel finish of old standing, especially if it was a material of heavy pigment content, requires several applications and several hours of soaking before the last application and the wash are effective.

After the pieces have been treated in this manner and it is evident that the old finish has been completely dissolved, the surfaces should be well washed with hot water to which has been added washing soda (known by the trade name of "sal soda") in the proportion of a cupful of the washing soda to a bucket of hot water. The pieces are thoroughly scrubbed with a scrub brush until all traces of the old finish are removed.

The finish on some old furniture will resist varnish remover, especially if the piece has been scorched in a fire. An extra strong solution of sal soda and hot water may be needed in such cases. Cold water can be used but one gets better results with less effort by using hot water, as it dissolves the wax in the finish. The furniture surfaces are then rinsed with clear water and wiped dry. All glue joints are inspected and loose glue joints are reglued.

When the wood in old pieces is too dark—from having been previously treated with stains—and it is desirable to have it lighter it can be bleached, with a solution of oxalic acid and water. This is applied and allowed to dry and crystallize on the surface.

The surface is then sanded and prepared for the new finish. A coat of paste wood filler is applied, and rubbed well into the pores and all cracks and crevices. Sufficient stain is added to the filler to correspond to the shade of the wood to be filled. After the filler has been rubbed in, the article is left to dry for a few hours, after which the surface is rubbed with No. 60 steel wool, and then waxed.

Where old pieces require a lot of filling it is desirable to apply a thin coat of shellac to bind or seal the filler; this shellaced surface can be rubbed with ground pumice stone and linseed oil and finished in wax if desired.

In finishing our copied furniture, when the wood is what we want the finish to be—that is if we are working with black walnut or other desirable wood—the surface is sanded as usual and then filled with an oil filler. When the article is to match in finish other antique pieces we add stain to the filler.

Walnut pieces 100 years old or older have a sort of a reddish cast and can be distinguished from copies by their beautiful color. This mellow effect can be obtained by adding a sufficient quantity of vermilion red color in oil to the filler; when it is used, however, enough brown walnut stain must be mixed with it to tone it down. When properly mixed with these two stains, the filler should be what might be termed a "brick red."

After the filler is applied the article is finished in the same way that the antiques are handled.

Most of the polishing is done by hand except in spindle work where the turnings are polished in the lathe.

Far-sighted managers know that lowered production costs are the principal source of net profits today.

Hours saved
Dollars saved
With
Murphy Permanent Stain

A better finish at less cost

A better finish—because

1. Murphy Permanent Stains *penetrate* and *do not raise the grain* of the wood. This means not only a depth of color and a grain figure development impossible with Water Stain; *but also* no "distortion" and abnormal "swelling" of wood fibre.
2. Water Stain, on drying, always precipitates a large amount of dry aniline residue which cannot be removed and "clouds" the finish. Murphy Permanent Stains leave absolutely *no residue*, and thus develop a "fire" not possible with Water Stain.
3. Murphy Permanent Stains are guaranteed equal in light-fastness to water soluble aniline stains.

At less cost—because

1. No expense or time for shellacing and sanding to handle grain raise.
2. Murphy Permanent Stains "register" *instantly*. This means many things—important savings in quickly compensating for wood differences "in the white"—application by spray, which means speed and ability to "high light" or to stain assemblies of radically different woods in the same spray booth as immediately consecutive operations, etc.
3. No putting back of moisture into carefully kiln dried wood; no affecting of veneers or glue joints—even with dipping. These are only hints. They do not touch on the biggest savings of all—floor space—because with Murphy Permanent Stains you never have to worry about the weather and can depend upon your work being in *constant motion* to a quality finish, with speed that will astound you.

During 1931, the MILLION mark was passed in pieces of cabinet work finished with Murphy Permanent Stains—without a *single* failure.

Surely, you cannot afford to pass up these savings which others are enjoying.

Write our nearest branch or salesman for information or demonstration, and get the full story.

(Murphy Permanent Stain is licensed by the Chadeloid Chemical Company.)

MURPHY VARNISH COMPANY
Newark Chicago San Francisco

Essex Varnish Company, Newark
(Associate Company) *Baking Material Specialists*

Questions and Answers

Finishing Wood Handles

I have a problem of finishing wooden handles in large quantities, and would appreciate very much if you would advise me where I may obtain the necessary information to do this work in an inexpensive manner.—W. P. C.

There are two methods of finishing wooden handles satisfactorily and economically; one is by tumbling and the other is by dipping. Tumbling, I believe, is the more popular method for finishing small wooden handles in large quantities, since it enables a large number of small pieces to be finished economically without individual handling. However, there is also on the market mechanical dip-finishing equipment that provides for a number of pieces to be dipped in the same operation and with excellent results.

For tumbling, the only equipment necessary is a tumbling barrel—preferably one mounted on a horizontal axis. This barrel may be of either wood or metal. For best results, I suggest you use a lacquer or enamel made specifically for tumbling purposes. However, you will find that tumbling lacquers are usually made fairly heavy in body, but this is intentionally done, so that they may be reduced to suit a variety of conditions. It is important in the tumbling operation that the barrel be only about half filled with the parts to be finished; this insures enough parts for plenty of friction, yet not too many to permit good tumbling action. Also, avoid putting too much finishing material in the barrel, as runs or sags may develop.

For dip finishing wooden handles mechanically, there are on the market dip finishing machines that mechanically immerse and slowly withdraw the handles from the finishing material. This provides an excellent dip finish, and best results are obtained by using a regular dipping lacquer or enamel.—J. L. M.

Touching Up Radio Cabinets

We want to touch up radio cabinets that have a very dark brown finish—a cheap thin coat on $36.00 sets, probably a one-coat job shaded. Just a colored material over the bare wood; not stain penetrated.

For this job we need a touch-up material to use with brush for marred spots. Holes are filled with hot colored shellac and these are no problem; but in sanding

Why do they STOP *at this particular style?*

WATCH the shoppers in a store. Your pride in your product will suffer. For they are casual—not particularly interested. They drift.

Once in a while *one* item—*STOPS* them! Traffic gets congested. Questions—interest—desire—SALES!

What is it that grabs their wandering attention? It's sometimes a new style—simplified, striking, original. It's often a low price. And many, many times it's merely a new *finish*—a brighter, clearer color—a richer, deeper quality. A *Sales-creative* finish!

Distinguish *your* product this way! It costs so little—often *less* than before. Egyptian Lacquers do it.

The Egyptian Lacquer man is as near to you as your phone. He has good *sales* ideas. Good *cost-saving* ideas, too. Call him up. Egyptian Lacquer is listed in the phone books of the following cities:

Atlanta	Cincinnati	Kansas City	San Francisco
Boston	Cleveland	Los Angeles	Seattle
Buffalo	Dallas	Philadelphia	Spokane
Chicago	Detroit	Portland, Ore.	St. Louis

In New York, call the Advertising Dept. at the home office.

THE EGYPTIAN LACQUER MFG. CO.

90 West Street · New York City

level, the edges show light or white wood which we are having trouble in correcting. It seems that we have not been able to get a dense enough stain to match. We cannot spray as the spots are too small and stain in naphtha rubs off when it is gone over the second time to get the depth needed.—C. O. S.

It is a little difficult to know just what you mean by "touching up." You say that the holes are filled with hot colored shellac, and when sanded down level you have thin white spots or bare wood. I assume that the shellac is being burned in the holes after one coat of finish is applied. I should say that this is entirely wrong. Where there is so little material applied that the light sanding or rubbing afterward cuts through to the wood, it is better to fill these holes before coating, so as to eliminate the necessity of rubbing. The little white spots that result after rubbing are very hard to match with one coat of finish, as in touching up you are going to leave either a light or dark spot unless very great care is taken in matching. Cheapness in material sometimes doesn't pay—especially where it takes a lot of time to get what you want.

However, if you must fill the holes after the finish is applied, I suggest you try liquid abrasive which will cut the shellac without cutting the finish. Rub this liquid abrasive on the surface with a felt pad, and touch up with a brushing lacquer—either red and black, or black mixed with a little red. It may also be necessary to add some oil color—Van Dyke brown, burnt umber or raw sienna. Experiment on this to get the proper shade.

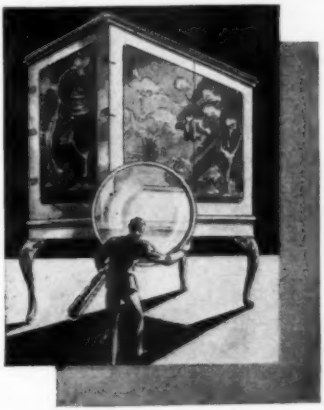
This may not be the cheapest method that can be found, but if it does your work quickly without a lot of retouching, you will gain in the end. I have found it very satisfactory in touching up cut edges and bad spots on mahogany, walnut and cherry; also on maple, but using different colors of course.

You could try some quick drying asphaltum varnish with some oil colors added—that is, tint the asphaltum varnish with Van Dyke brown, burnt sienna, and a little raw sienna, being careful to avoid using too much raw sienna, as it will give the black a greenish cast. Do a little experimenting to get the proper shade.—J. K. Cooper.

Chests Bleed Cedar Oil

We have experienced considerable trouble with the oil coming out of cedar chests after they have been finished with one coat of pure shellac or one coat of shellac and one coat of varnish, and stored away. This bleeding is on the inside of the chest and seems to occur irregularly—only when shellac or varnish or some filler is used. Please understand that this bleeding occurs on the unfinished, inside surface after the chests have been finished on the outside. Have you any information which would enable us to overcome this trouble?—L. M.

The chest trouble you mention is one we have experienced. The trouble is caused by fumes of naphtha or turpentine mixing with the red cedar fumes. This causes the cedar oil to come out of the cedar and, in turn, the cedar fumes will prevent oil stain or varnish from drying.



ONLY A PIN-PRICK

... yet the potential source of serious loss....

● Such a little thing, a pin-prick! Yet its presence in the finish is bound to spell increased finishing cost or, worse still, rejected merchandise, possibly even lost accounts. ● Lacquers properly formulated with Butanol or Butyl Acetate are your best assurance of dependable finish and lower finishing cost. Their perfect flow, their reliable freedom from blush and orange peel, and from excessive need of "sanding," have established the standards of lacquer value, wherever fine finishes are desired. It will pay you to specify "formulated with Butanol" on your next lacquer purchase.

COMMERCIAL SOLVENTS CORPORATION

230 PARK AVENUE NEW YORK, N. Y.
PLANTS — Terre Haute, Indiana, and Peoria, Illinois
Immediate service from strategically located warehouses

BUTANOL

"It spells Lacquer Safety"

The way we overcome this in finishing is by tacking a strip of .100 fiber board about 4-in. wide around the inside of the lid. This allows us to finish the lid moulding without allowing any leakage through between the lid and the body of the chest. This strip is left in the chest until the varnish is dry. (The strip of fiber serves as a sort of gasket fitting between the lid and top edge of the chest.)

We have some chests made of oak, the tops of which have raised cedar panels on the under side. The space between the edge of the panel is finished the same color as the exterior of the chest. We have found that we must use water stain in this space. If oil stain is used, it will draw the cedar oil out of the top panel and make a messy job.

Keep the cedar fumes and the naphtha fumes apart, and you will have no further trouble.—J. A. MARSHALL.

Match Gum and Walnut

Referring to P. C. C.'s inquiry about how to stain black gum to match walnut veneers (page 36, January issue) I suggest P. C. C. use a combination liquid filler-stain (Mfr's. name on request). This liquid filler-stain is designed to stain walnut and gum, or mahogany and gum and, in my opinion, it is more satisfactory than the combination paste wood filler.

To apply combination liquid filler-stain to walnut and gum, stir the filler thoroughly before using and apply it just as it comes from the can. After applying, allow 10 to 15 minutes to set on surface; wipe across grain as you do with regular paste fillers; then clean off thoroughly. This gives a transparent, uniform color; it also fills the pores of the surface for subsequent coatings; and it can be purchased for use under either lacquer or varnish.—GEO. MOSKOS.

Lacquering Machine Tools

In reading January issue of INDUSTRIAL FINISHING, I noticed the question of the F. G. S. Co. regarding the trouble they have encountered in lacquer finishing machine tools. As a remedy for their trouble I suggest they use the same method they are now using for cleaning the tools, and also continue the application of the lacquer filler. Then (instead of applying two coats of binder) dip or spray on one coat of a new metal primer (name on request). This metal primer is clear and has perfect adhesion; it can be used under any type of material—baking or lacquer enamels—and I believe it will help you to overcome the trouble you are now having with the minute holes and air bubbles.

This primer dries in two hours to recoat with lacquer. I have used it myself on castings and have found it to be very dependable. It will seal all the small holes in any metal part. I used one coat dipped, and baked half an hour at 250° F., and then applied two coats of lacquer over the primer, allowing 2½ hours drying time after each coat. The castings came out in such perfect shape that they appeared to have been rubbed and polished.

I believe that if you discontinue the two coats of binder and replace with one coat of this clear metal primer, you will find it to be more economical and dependable.

An ideal method for cleaning castings, in my opinion, is the

WITH THE RIGHT FINISH, YOU'LL FINISH RIGHT

In the Shadow of the Immortal George

As we celebrate the Washington Bi-Centennial, we think of Valley Forge, Crossing the Delaware, a hatchet, a cherry tree and the fabled words — "Father, I cannot tell a lie."

In the shadow of the "Father of His Country," we too must tell the truth. With quality materials and every formula developed to satisfy particular requirements, Lilly Finishes are manufactured under rigid standards which guarantee the uniformity and dependable performance that successful manufacturing demands.

Write us about present or future requirements. Address either office.

LILLY VARNISH COMPANY

Lacquers, Enamels, Stains, Fillers and Varnishes

666 S. California St. Indianapolis, Ind.

273 N. California Ave. Chicago, Ill.

LILLY

Kindly mention INDUSTRIAL FINISHING when writing advertisers

"washing method." This requires three tanks—one containing a solution of boiling water and enough cleaning compound to insure absolute removal of all grease, oil and dirt; another containing clean cold water to rinse the parts after cleaning; and a third with clean hot water to speed drying after rinsing. This "washing" of the castings absolutely removes all the dirt from the "fine-pore" surface of the machine tools, thereby leaving a clean surface for the application of the lacquer filler.

In summary, I suggest you (1) remove all casting scale and sand; (2) pass the pieces through a cleaning tank; (3) apply one coat of lacquer filler; (4) apply one coat of clear metal primer and let dry two hours; (5) apply two coats of lacquer. I believe you will find this a very satisfactory way to handle your day's production.—G. M.

Useful Interior Periscope

Very often we have something which needs internal inspection. It is impossible for a human being to get inside of many containers because the opening is too small and the human head is too large.

But at least an ingenious method has been worked out for actually seeing interiors. It may not be applicable to all interiors such as long pipes and pipe coils but it is applicable to many of them such as drums, barrels, cylinders, etc.

Herewith is a photograph of a man inspecting the interior of a drum by means of the device. It is nothing more or less than a small periscope—an electrically lighted "interior periscope." This handy device has already proved itself to be very valuable to its users. The operator can clearly see any portion of the interior by simply moving the periscope up and down. He can quickly tell whether or not the interior is dirty or whether it needs repairing. The cost of cutting into the vessel to "take a look" is eliminated and as a result much money may be saved. Furthermore this method is safe. The unsatisfactory naked flame method of inspection and the lamp bulb method have both caused many accidents and deaths. —W. F. S.

Inspecting interior of paint drum.

W. A. Green to Represent Paasche in Texas

Mr. W. A. Green is the new Paasche representative for Northern Texas. He will contact all users of air-finishing, air-painting, air-coating and air-decorating equipment in this territory and render service to Paasche users. For the time being, Mr. Green will be located at Burleson, Texas, just out of Fort Worth. All users of air-finishing and air-painting equipment will find Mr. Green eager and willing to serve and cooperate with them.

Air-Washed Paint Spray Booth

(Patented)

Portable or Stationary

Convenient - Safe - Economical

THE stationary type can be located any place in the plant as this installation, stationary or portable, requires no stack. Used air is washed and returned to room, or can be discharged outside.

Eliminates all fire and explosion hazards and meets all Underwriters requirements, all state laws and local ordinances.

Improves Ventilation — Saves Heat
Conserves Workers' Health

Grand Rapids Blow Pipe and Dust Arrester Company

Dust Collecting Systems 527 Monroe Ave. Grand Rapids, Michigan

BANISH *the*

FREE

... The du Pont guide book to better and more economical product finishing. Just off the press.

DU PONT

REG. U. S. PAT. OFF.

FINISHES

"ifs" *and* "buts"

from your finishing room

FREE—This book gives complete story of finish pre-testing. Contains important information affecting the quality and durability of your product.

THERE are men who can tell you just how well the finish on your product will weather normal wear and exposure. There are places throughout the country where unusual conditions are met and mastered before they ever confront your product. The story of these places and men is the story of du Pont Pre-Testing. It discloses an almost unreasonable severity in tests of finishing materials . . . tests to which all du Pont finishes are subjected.

"Pre-Tested" presents no formulae, makes no effort to sell you a specific finishing system. It does point clearly the way to greater durability and beauty for your product.

Believing this information important to both manufacturers and users of any product finished in paint, varnish, enamel, or lacquer, du Pont is distributing a limited edition of this book free. This coupon is for your convenience. We hope you will not delay your request too long. E. I. du Pont de Nemours & Co., Inc., Industrial Finishes Division, Parlin, New Jersey.

COULD YOUR 1932 SALES be affected by this instrument in the Du Pont Laboratories? Read, "Pre-Tested."

E. I. DU PONT DE NEMOURS & CO., INC.,
Parlin, New Jersey.

Gentlemen: Without any obligation on my part, please send me free copy of your book, "Pre-Tested."

Name.....Office.....
Firm.....
Address.....
City.....State.....

LEADERSHIP

We honor those who have shown that high combination of vision, strength and understanding which the world needs in critical times.

Does not the business world today need these same qualities?

Stille-Young service and co-operation can be made a stabilizing factor in your business by lowering costs, by standardizing finishing materials and by increasing the efficiency of the finishing process.

And, these things are important in a business situation where care, attention and low costs are requisite.

THE
STILLE-YOUNG
CORPORATION

CHICAGO, ILL. HIGH POINT, N. C.

Manufacturers of Lacquers «» Shellac «» Stains «» Fillers «» Specialties

New Materials and Equipment

Crown Spray Gun

To supply the need for a small yet efficient spray gun, the Crown Spray Gun Mfg. Co., 1218 Venice Blvd., Los Angeles, Calif., announces the Crown No. 6 gun, designed for touch-up work, furniture shading, stenciling, electrical-fixture finishing; in fact, wherever fine results must be obtained in the finishing of small surfaces.

The gun is substantially constructed of few parts and is simple to use. The grip is shaped so that it fits comfortably in either large or small hands, allowing accuracy and ease in operation. An important feature of the gun, according to the manufacturer, is its positive freedom from clogging, even when spraying rapid drying materials, a disadvantage sometimes found in small guns. By use of spring needle mounting, the operator is enabled to instantly clear the nozzle by pressing the head of the needle rod, without interfering with or altering the fluid adjustment from its original setting.

The gun provides exceptionally fine atomization of all materials and is fitted with a sturdy 4-oz. glass container.

Sprays from Tire Pressure

A clever little spray gun for use by car owners in retouching scratches and worn spots or refinishing small areas has just been placed on the market by the du Pont Company. This gun, known as "No. 7 Touch-up Spray Gun," uses the tire as a source of air pressure. It is made especially for use with No. 7 touch-up black, a retouching enamel sold in a small can equipped with an unusual type of nozzle. The spray gun is equipped with a cap which exactly fits this nozzle, making it possible to attach the gun and spray directly from the can. The touch-up black does not have to be thinned or prepared in any way. It dries with a glossy black finish which does not require polishing.

Gun attached to can of touch-up black.

The gun is simple, inexpensive and easy to use. All that is necessary to do is to remove the cap on the can and attach the gun in its place. The 6-ft. hose attached to the gun is then fastened to the tire, and one starts spraying by pressing a little trigger on the gun.

Part of the air pressure in the hose passes through tubes going directly to the nozzle, causing a suction which pulls the paint up the tube extending into the can, and forces it cut of the nozzle in a fine spray. Part of the air pressure, however, is carried into the can through another tube, creating actual air pressure in the can and insuring a steady flow of the paint and a uniform spray. The gun cannot be used with an open container, as the pressure developed in the can is an important factor in the gun's efficiency.

A small bottle with a nozzle similar to that used on the No. 7 Touch-up Can is supplied with the gun for cleaning purposes. After the gun has been used, a little gasoline, turpentine or kerosene should be placed in the bottle and the gun mounted on it. By spraying one of these solvents through the gun, it cleans out the tubes and nozzle, and prevents any blocking of the tubes which might occur if the paint were permitted to dry in them.

Compressor Air Filter

The Coppus Engineering Corp., Worcester, Mass., (Mfrs. of industrial blowers, ventilating equipment and steam turbines) has added to its line the Annis Air Filter used extensively on air intake of compressors and internal combustion engines.

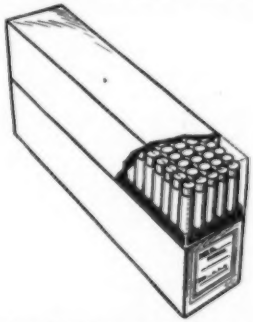
The Annis Air Filter is the "dry" type made in standard units permitting assembly to give any desired capacity. The design is simple and the construction rugged.

Each complete filter is enclosed in a weatherproof enameled sheet metal cover suitable for outdoor erection without need of additional housing. Louvres or similarly protected openings in the housing provide for proper air admission without restriction of air flow.

Annis Air Filters are easily cleaned, without removal from position, either by blowing the dust and dirt off the filter elements or by removal with a vacuum cleaner (the outside of the elements being the dirty side). The felt elements are low in cost permitting their replacement after long use, without undue expense.

Sample Storage Box

The R. P. C. Co., 26 Cortland St., New York City, introduces its new "R. P. C." sample storage box for liquids and solids. A single



Affords quick reference for samples of varnishes, lacquers and dry colors.

"R. P. C." sample storage box measures 3½x5¼x11½-in., is partitioned to keep each sample in place, and is particularly useful for storing samples of varnishes, lacquers and dry colors. This box is furnished complete with 100 vials, corks, gummed labels and large index card. It enables the technical man to keep 100 samples in a compact, portable accessible outfit.

NOW A REMARKABLE NEW FINISH

that speeds production

•

Berrylac is a sensational development for all general industrial finishing purposes. It enables you to cut corners, reduce costs, speed production and actually improve the quality of your finish at the same time! It air dries like lacquer—or bakes in 30 minutes. No primer is used—and no rubbing or waxing required. One coat produces a beautiful finish—two coats a lustrous, china-smooth surface that is tougher than lacquer and remarkably resistant to chipping. Get the facts. Write for complete details. Take advantage of this important new development that actually revolutionizes industrial finishing.

BERRY BROTHERS

VARNISHES • ENAMELS • LACQUERS

DETROIT, MICHIGAN WALKERVILLE, ONTARIO

You Need

WATEROIL STAIN

Because it is fast to light. Does not bleed or fade, will not raise the grain. Covers more area per gallon. Produces a TRUE WATER COLOR.

|||

 # 1900 WATER OIL RUBBING OIL eliminates entirely the bluish bloom or haze. No finger marking or oily surface.

|||

STAR SHELLAC STICKS. New Prices. Write us for information.

|||

Quick Drying Fillers, Lacquer Shading Stains, Finishing Waxes, Lacquers, Sealers, Drawer Coaters, etc.

"Unquestionable Quality"

WOOD FINISHING SUPPLIES

V. J. DOLAN & COMPANY, INC.

1830 N. Laramie Ave. Chicago, Ill.

Two New Colors

4911 Vermont Maple — 4896 Aspen Wood Acid Stain Powders

Produces almost exactly the antique color and tone of antique satin maple, found only in the original aged Vermont Antique Maple Pieces.

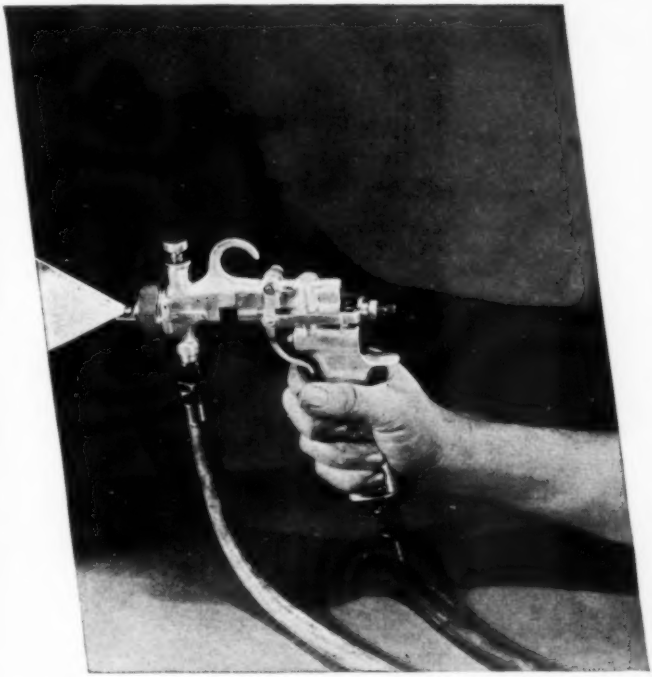
A beautiful clear amber brown, harmonizing splendidly with walnut and other contrasting colors. Used on overlays and drawer fronts.

The newest shades for modern designs
Write for trial samples today

THE GILBERT SPRUANCE CO.

OFFICES — WORKS — LABORATORIES

Richmond and Tioga Streets Philadelphia, Pa.



Spraco guns provide accurate spray control, sensitive as your trigger fingers . . . are fast . . . guarantee even distribution and a uniform shape down to the point when the needle closes. Bulletin I-130? No obligation.

SPRACO, Inc.

116 Central St. Somerville, Massachusetts

355

SIX POINT WHITE

A product chemically engineered to give a long-awaited finish for refrigerator boxes, vending machines, hospital equipment or anywhere that a uniquely superior Lacquer Finish is desired.

Point 1. Tenacious Adhesion.

Point 2. Minimum Discoloration.

Point 3. High opacity combined with smooth flow and lustrous sheen.

Point 4. Unbelievable resistance to chipping, scratching, printing and other mechanical abuse.

Point 5. Marvellous resistance to water, oil, sulphur dioxide gas, and actinic rays.

Point 6. Write us for this and further information on our "SIX POINT" White System.

The Varnish Products Co.
Cleveland, Ohio

N. B. "6-Point White" can be tinted to a wide range of desirable pastel colors.

Striping Materials

For best results, the striping material spread by a striping tool should be of a rich, creamy consistency, so that when laid on it will "stay put" and show a luster. If it is too thin it will spread and will not show very bright. One must use good judgment in this respect and learn to rely largely upon his experience and skill.

The striper must not forget that some evaporation of the striping material solvent or thinner will take place if the container is open, and as this occurs the material gradually becomes slightly thicker. To compensate for this loss, a small quantity of solvent or thinner should be added from time to time. Here also one must use good judgment.

It is good practice to prepare or open only small quantities of striping material at a time; if in steady production, I suggest preparing or opening only what will be used in say four or five hours' time. By preparing only small amounts at a time, one gets a cleaner, brighter striping job.

Do not leave a prepared mixture or batch of striping color in a metal container overnight, as a chemical action may take place which will turn the striping material "off color" or perhaps ruin it. If you must keep some left-over material overnight, place it in a glass or porcelain enamel container that can be closed tightly to prevent evaporation of any of the solvents.

The striping tool should be thoroughly and carefully cleaned after every job, or when laid aside to be out of service only a few hours. For this cleaning I always use the solvent or thinner suitable for the striping material I've been using.—J. E. Lees.

"It suffices not that beauty should keep solitary festival in life; it has to become a festival of every day."
—MAETERLINCK

OF every day —of every day things—of things made and sold by you. Capture beauty—make it the essence of your product—and it will pay you well. Whether you work in wood, metal or composition, our studio can help you to beautiful finishes—new, exclusive, modern finishes which raise your product out of the realm of the commonplace. To manufacturers there is no charge or obligation for this studio service—merely send samples on which our artists can work.

ROCKFORD VARNISH CO.
ROCKFORD, ILLINOIS

Metal Finishing Department

Cleaning-Handling Baking & Polishing

Bake-finishing Pressed Steel

Automotive Parts

by J. B. NEALEY
American Gas Association

GROUPING all of the mechanical units contributing to the manufacture of a product, along a continuous traveling conveyor, is the goal sought in mass production, and when the heating processes can be mechanized and synchronized with the rest of the line, there is small room for improvement. Such a grouping has been set up in the Detroit Pressed Steel Division of the Midland Steel Products Co. at Detroit, Mich., for the making of parts and assemblies of "Midland Steeldraulic Automobile Brakes."

In this plant a large jobbing business in medium and heavy stampings for all industries is carried on, and many parts for the automotive industry, such as assembled chassis frames and chassis frame parts, brake backing plates, front engine covers, fender brackets, etc., are produced. The first unit on the brake assembly line is a combination washing machine, japan dip and bake oven served by a single traveling conveyor; this conveyor consists of two chains, suspended between sprockets, which support 8-ft. bars between them. The parts in process are hung on these bars and taken through the seven operations without interruption. These include washing, drying, cooling, dipping, draining, baking and cooling. The two operations of loading and unloading might be added.

The washer and bake oven, including the dip tank, are enclosed in an insulated sheet-steel structure 60-ft. long, 10-ft. wide and about 15-ft. in height. The washing machine consists of a tank of water, heated with gas burners, overhead spray and a pump, the

TIME-TESTED FLEXIBILITY SINCE 1924

(Note DATES on Evidence
Names of Customers on Request)

May 6, 1929- "... we have in our plant several strips of metal sprayed with your lacquer enamels. They have been hanging over steam-pipes for two years (since 1927) ... the other day we tested and found the lacquer still flexible and with good adhesion. The color has maintained its original shade ..."

●

July 19, 1930- "... without exception, in the writer's opinion, this is the most flexible and most desirable white finish we have ever had in the plant and we feel that you are to be highly complimented in producing a product of this nature."

●

March 10, 1931- "... it has the best adhesion and flexibility ... after heating at 100°C for a few days of any lacquer I have ever tested..."

●

May 6, 1931 - "... on examination of some of the original tests which we made about a year and a half ago (1929), we find that the material is still flexible and has shown no signs of deterioration, whatsoever..."

NOW

..... *The Same old*

FLEXIBILITY

..... *The Same old*

ADHESION

PLUS *Mirror-like* HIGH LUSTRE

Here is our old standby pepped up for 1932. The well-known *flexibility* and *adhesion* are maintained. In addition, there has been added an *EXTRA* toughness.

Testing this new surfacing with the fingernail or a coin shows you a live, curling film .... IF ... you succeed in scraping it off!

Thinned *one-to-one* and applied on bare metal, this improved material flows out to a beautifully smooth surface .... giving complete coverage *in one coat*. It can be blanked, stamped or drawn. Air-drying time not more than fifteen minutes. No Primer ... No Bake! Write on your letterhead for samples of Roxalin *Flexible* Enamels sprayed on metal strips. You can make them do a "daily dozen" on your desk-top. We'll send along the full color range in which these materials are available .. and complete data for your attention.

ROXALIN FLEXIBLE LACQUER CO., Inc.

40 Thirty-Sixth Street, Long Island City, N. Y.

Service to the Mid-West from Chicago Warehouse

Kindly mention INDUSTRIAL FINISHING when writing advertisers

hot water being forced onto the work through high pressure jets. The water in the 1800-gallon tank is heated with an immersed coil, one end of which is welded into one end of the tank, and into which the gas burner fires. The water is carried at 150° F. The burner is of the premix type, gas and air being intimately mixed in a motor-driven blower before being forced through the burner.

The conveyor travels through the washer horizontally, but immediately thereafter it changes direction for two passes vertically in the dryer, which is heated to 400° F. with a single gas burner, with temperature control. The work exits from this oven to the cooling section through an air-locked opening, and after a cooling pass, descends into the V-shaped tank containing the japan, and travels back up over the drain board, into the bake oven, through another air-locked opening. In this oven, which is only 17-ft. long, the conveyor makes seven vertical passes between sprockets, giving it a total travel of 90-ft. This oven, which is indirectly fired, is carried at 450° F.

Heat is supplied by a separate gas-fired heater consisting of a well-insulated double steel-jacketed shell, cylindrical in shape, and with a single gas burner set in one end. Recirculation is employed in this heating system, a motorized fan and duct at the other end of the heater drawing the heated air from the oven and forcing it into the heater where it is reheated and passed

Above: Loading end of japanning oven conveyor; note washer in front.

Right: Discharge end of japanning oven where parts are removed from conveyor.

Get a Copy of "REZYLS" and See How Easily *Your Own Formulas* Can be Improved

Paint, varnish, lacquer and enamel users can now get finishes containing the best in phthalate and similar synthetic resins of the polybasic acid type, under positive patent protection. Rezyls and Rezyl Balsams are now sold on this basis for formulation.

The Rezyls are complete film forming materials combining the elasticity of oils with the hardness and gloss characteristic of resins. From a practical standpoint, Rezyls can be considered as synthetic varnishes rather than as mere additions to the rapidly growing list of synthetic resins.

When used with other lacquer ingredients Rezyls are entirely compatible with them. Rezyls are readily soluble. They reduce nitrocellulose requirements. Formulating with Rezyls adds durability to the coating and tends to cut its cost.

We have published a booklet which includes much of our experience with Rezyls in different fields of use and the results of our exhaustive tests on different formulas. This interesting booklet will be sent upon request.

Industrial Chemicals Division

American Cyanamid Company

535 Fifth Avenue New York

AMERICAN CYANAMID COMPANY, 535 Fifth Avenue, New York
Send the booklet, "Rezyls" and other information on
☐ Air Drying Finishes ☐ Baking Enamels ☐ Lacquers for use on:
☐ Furniture ☐ Textile ☐ Clear ☐ Wood
☐ Industrial ☐ Automotive ☐ Pigmented ☐ Metal

Name _____

Address _____

For attention of _____

back into the oven through another duct in the heater shell, closer to the burner end.

Of course, some fresh air is needed and this is taken in through a dampered port in the first duct. The proportion of this fresh air varies considerably with the type of japan employed, but the smaller the volume used, the greater the economy of the oven. The volume of hot air required to fill the oven is recirculated about five times a minute. The surplus air, equal to the amount of fresh air inducted, is exhausted to the atmosphere through a stack. Steam from the washer and fumes from the dipping compartment, are exhausted through a duct serving both and by an induction fan with motor.

The heat of the entire system is automatically controlled through a thermostat and a motor operated valve in the gas supply line. The expansion and contraction of the rod element in the thermostat makes and breaks a circuit through which the motor operating the valve is made to open and close the valve, thus increasing or decreasing the volume of fuel going to the burner, as dictated by the rise and fall of the temperature in the heater and oven, beyond the limit set on the thermostat.

A safety valve of the magnetic type is cut into the gas line, just back of the control valve, which automatically shuts off the fuel supply in the event of current failure.

Fire quenching liquids and gas, with sprays in the tank and CO_2 gas in the oven are interconnected with automatic releases which release them in case of fire, while, at the same time the japan in the 450-gallon dip tank is automatically drained off into an underground reservoir. The burner is supplied with a gas pilot.

As the work comes out of the oven it is given three vertical passes on the conveyor, the first two for cooling and the latter bringing it into a convenient position for unloading. The conveyor then turns at right angles at the top of the pass and travels over the oven and washer back to the point of beginning. This conveyor is driven with a 2-h.p. motor through a spur gear reducer and variable-speed transmission, and an on-and-off push button control is provided at both ends of the oven. The motor, transmission equipment, sprockets, chains and other parts of the conveyor are supported on structural steel work with expansion allowance and tracks.

A 25-day test in which 1,443-300-lbs. of work was processed, showed a fuel consumption of 210,000-cu.ft., which was purchased at the rate of about 68c per 1000-cu. ft. This reduces to 1-cu.ft. of gas for every 6.85-lbs. of work, or a fuel cost of one cent for 100-lbs. of work.

As the brake parts are unloaded from the oven they are put directly onto the traveling conveyor which is the final assembly line.

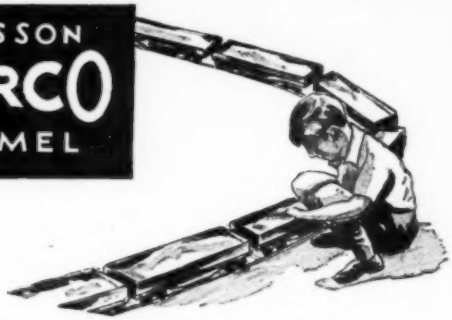
Automobile Show Finishes

Paispearl Products, Inc., of New York City, report that a number of cars finished with Paispearl now being exhibited at automobile shows throughout the country are attracting the public's attention.

Prospective car buyers are showing more interest than ever before in the finish and appointments of the various makes and models.

The depth and brilliance of the finish on cars finished in pearl lacquers has aroused so much enthusiasm on the part of both dealers and the public that many automobile and lacquer manufacturers are considering the striking color effects that can be obtained through the use of pearl essence in lacquers.

GLISSON
BERCO
ENAMEL



If You Make Toys

IF YOU make toys . . . or bread boxes . . . or furnace casings . . . or any product where appearance and durability count for something in making sales . . . then you are interested in the finish on your product.

You are interested in getting a better finish and at the same time in speeding up production and cutting finishing costs per unit. You want an enamel which will cover solidly in one coat, one which will adhere perfectly and form a tough elastic film which will not chip or mar readily.

BERCO 1-Coat Glisson Enamel does all these and more. Its use requires no special thinner and permits maximum thinning. It does not "paper print" or "orange peel." It saves spraying time. It bakes or air dries overnight to a hard glass-like finish. It is made to fit your baking schedule.

Write to us today, outlining your finishing problem briefly. Send us a color sample and tell us your present baking schedule or if for air drying. We will submit our suggestions along with a liberal sample to try out in your own finishing department. No obligation, of course. It is our chance to be of service to you.

NORTH BERGEN VARNISH CORPORATION

Makers of Varnishes, Lacquers and Enamels

989-1005 39th St. North Bergen, N. J.

Custom, Ornamental and Production Striping With—

Mechanical Stripers

by P. C. BARDIN

THERE is available today, a mechanical striper for practically every kind of striping job. All of these are precision tools, and most of them are production tools. Formerly, these excellent devices found their chief popularity in the large plants producing automobile bodies. Their use has gradually become more wide-spread, until now mechanical stripers are used for all kinds of products, in large and small shops, wherever striping is required.

Although the striping machine is mechanical, it is impossible to place the device in the hands of

A finished product!

Nothing has been left undone to make

JONFLEX
Precision-Edge Masking Tape

the best all-around tape for general industrial finishing. It is a perfect product and leaves nothing to be desired. We mean it (and can prove it) when we state that it is easily applied and maximum adhesion is obtained. Easily removed, leaving no "fuzz". Lacquer and solvent proof—insuring full protection to covered surfaces. Flexible—it can be twisted into any design desirable. Send for samples as final proof of its unmatched excellence.

JOHNSON & JOHNSON
NEW BRUNSWICK, N.J.

an inexperienced operator and expect to obtain satisfactory results on a real production basis. On the other hand, the time required for an operator to become adept in the use of the mechanical striper is negligible when compared with the time needed to produce a hand brush expert.

After the operator of the mechanical striper has become experienced in the use of this device, it is estimated that he should, on the average, produce about twice the amount of work (in some cases, five times as much) in a given length of time as compared to the experienced hand striper. In striping certain pieces, for instance various size wheels, it has been found that the work can be accomplished from 2 to 30 times (depending on size and type) as fast with the mechanical striper as with hand brush methods. By using a striping material of the proper consistency and correct handling of the striper, it is possible to produce neat, accurate and uniform work with remarkable ease and rapidity.

Rotary Striper

One type of mechanical striper (see Fig. 1) may rightfully be called the rotary striper, inasmuch as the stripe is rolled on the surface by means of a knurled-face wheel which revolves (by means of contact with the surface to be striped) in the color material contained in a metal cylinder. The slot in the color container is adjustable to three different width wheels which produce stripes 1/32, 1/16 and 3/16-in. wide. There is also a screw adjustment for making light, medium or heavy stripes. An adjustable guide that may be used on either side of the device is provided to gauge the position of the stripe. Four different shapes and sizes of guides are furnished to accommodate various types of surface projections. A thumb trigger starts and stops the flow of striping color.

To perform accurate and uniform stripes it is necessary that the guide be set so that the tool may be held in such a position that the face of the striping wheel squarely contacts the surface to be striped. This striper can be used on curves, as it rides the curves perfectly.

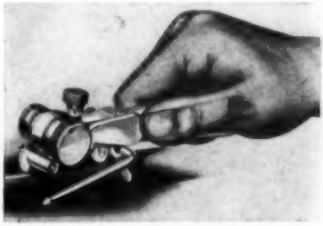


Fig. 1—A little wheel, revolving in color, rolls the stripe on.

The capacity of the color reservoir is sufficient to stripe an average automobile body; however, for production work, an extension elbow is available which greatly increases the capacity of the color container.

Overhead striping can be done if the extension elbow is used. This elbow is adjustable and can be swung into any desired position in less than a second, so that it can be quickly adjusted and will feed striping color uniformly and perfectly on overhead striping.

Airbrush Striper

Another type of mechanical striping tool (see Fig. 2) is known as an airbrush striper because it consists of a special form of spray gun mounted on two adjustable wheels; these wheels not only

IMPERVIOUS "IVCO" LACQUER, VARNISH and ENAMEL

Trademark No. 276989

ENAMELS · IMPERVIOUS · TRADE IVCO MARK · PRODUCTS · LACQUERS · VARNISHES

Registered U. S. Patent Office

IMPERVIOUS Lacquer, Varnishes and Protective Paints are Quality Products

Manufactured By

IMPERVIOUS VARNISH COMPANY

General Office: Koppers Building PITTSBURGH, PA.

Factory and Varnish Plant ROCHESTER, PA.

No Branch Factories

ARMORCOID

Baking Air Drying

A fully tested porcelain-like finish in Enamel suitable for—

Interior or Exterior use as Specified

Metal Furniture — Automobile Parts
Electrical Equipment — Metal Signs
Radiator Covers — Tile
Lighting Fixtures, Oil Producers Equipment, Etc.

High solids give exceptional build and toughness. Has unusual adhesion, hardness of baked finish, high gloss or dull finish.

Can be made Mar-proof or Non-scratching.
Do you require a one coat white?

John L. Armitage & Co.

Newark, N. J. or Detroit, Mich.

support the gun and color container, but also serve as a guide in the striping operation. By adjusting the wheels, the airbrush head may be spaced at the proper distance from the work to obtain the

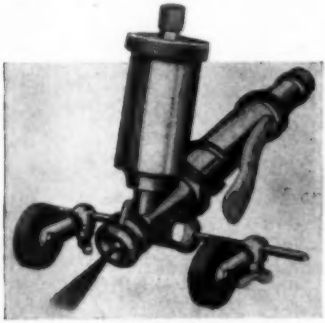


Fig. 2—The airbrush striper can be adjusted to spray wide stripes.

width of spray desired. Various multiple spray heads may be coupled to the airbrush for light and heavy colors, thereby providing a variety of finish effects.

The multiple spray heads may be removed and flow nozzles of different sizes substituted for flow striping from 1/16 to 1/2 in. wide lines. This tool is adapted to the shop where a wide variety of work is to be done. Due to the interchangeability of the various heads and nozzles and the adjustability of the device, this tool may be used for striping, stenciling, shading, stippling and air-coloring.

Fountain Striper

Still another type of mechanical striper is shown in Fig. 3. This striper operates without the aid of air pressure. The striping color is deposited on the surface by means of a nib, the action of which is similar to the pen commonly used by draftsmen. Different nibs are used to produce various width stripes. The flow of color is started, controlled and stopped by means of a thumb trigger. A screw adjustment is also used to control the amount of color material fed into the nib.

Two features of this particular tool make it adapted to striping curved surfaces and overhead work. First, a ball-bearing turret head swivels, when released, turning the nib to follow the contour of the oval, round or oblong surface. Secondly, the color cup may be removed and a pressure cup substituted, by means of which the striping color is forced out of the nib irrespective of the position in which the striper is held. Both of these features make this striper especially convenient in striping automobile window frames and reveals, and wherever overhead or underneath striping is desired. Any of you who have attempted to write with an ordinary fountain pen on a vertical surface will appreciate the advantage of the pressure cup.

Attached to the revolving turret head is an adjustable guide and wheel. The wheel acts as a rest in the striping operation and is

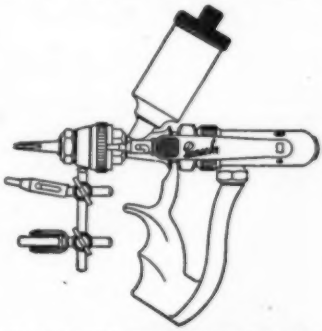


Fig. 3—Spreads the striping material like a draftsman's ruling pen.

HIGH GLOSS ENAMEL

For Hardware, Fixtures and other metal articles.

Not the average so-called Gloss Lacquer Enamel, but a Super Gloss White is available in—

GLOSS WHITE ENAMEL No. 64

(Also made in Ivory or Pastel Shades)

An exceptional combination of hiding, toughness and permanency is embodied in this M & W Quality One Coat Lacquer finish.

You are invited to write our nearest office.

MAAS & WALDSTEIN COMPANY

Executive Offices and Plant

430 Riverside Ave. Newark, N. J.

Chicago Office & Warehouse
1115 W. Washington Blvd.

Los Angeles Office & Warehouse
2416 Enterprise Street

Its Greater Painting Power

REDUCES FINISHING COSTS

Read Why . . . .

SUPER SPRA-MORE "44" **Price, Complete . . $69.00**

Because of its exclusive twin diaphragm compressor design, the Super Spra-more has a greater efficiency . . . delivers more painting power . . . than any other portable spray painting equipment in its class.

Through Crown's specialized knowledge in the use of portable spray painting equipment, many manufacturers have been able to effect substantial savings in product finishing. Information on modernizing your present methods may be had for the asking. Simply write

CROWN SPRAY GUN MFG. CO.

1218 Venice Blvd. Los Angeles, Calif.

Boston, 105 Broad St.; Newark, N. J., 1057 Bergen St.; Chicago, 551 W. Lake St.; Houston, 1027 E. 11th St.

adjusted to accommodate surface conditions. Either the wheel or the swivel guide may be removed, or both may be removed to suit the particular work in hand.

This same type of striper is available in smaller sizes wherein a pencil-like handle is substituted for the projecting handle. The smaller models are used principally for small work, and have all of the refinements and adjustments of the standard striper.

Although it is possible to use any liquid color of proper consistency in the above described stripers, it is advisable to use striping lacquer, or other materials manufactured especially for this purpose, to obtain the best results.

Consistency of Material

The color material should be thoroughly mixed in a separate container and then strained into the reservoir of the striper. The consistency of the material should be about that of average cream, or in other words, so that the material will drip at about the rate of one drop per second. If the color material is too heavy it may cause skipping, and if the material is too thin it will blur or run when it is applied. Successful work depends upon the proper consistency of color material in relation to the adjustments of the particular striping tool used.

Great care must be exercised in running a horizontal stripe across a vertical surface, to prevent sags or runs. This applies especially to wide striping, say 1/8-in. and up.

Guiding the Stripe

In most cases there is an edge, moulding, flange or some other projection on the piece to which the striper guide may be set. If no edge is available for the guide to follow, a separate guiding edge may be temporarily fixed on the surface to allow the striper guide to follow.

It is a good plan to keep the striping end of the tool submerged in lacquer thinner (or solvent for other materials) when not in use during the day. This prevents drying and caking of the color material on the wheel, nozzle or nib, as the case may be. When putting the striper back into service again, it is best to wipe off the free thinner or other solvent with a rag, so that the first material applied will not be too light in consistency. Each type of striper herein described, including the air-brush, has a small vent hole in the color reservoir. This vent hole must be open and free at all times if satisfactory work is to be performed.

Cleaning the Striper

At the close of the day's work, the striper should be thoroughly flushed out with lacquer thinner or other solvent and the color reservoir cleaned before putting the tool away. The thumb trigger and any other moving parts should receive a drop of oil occasionally.

It must be remembered that the mechanical striper, regardless of type, size or manufacture, is a precision tool and it should be handled as such. Plyers for loosening or tightening moving parts, and finishing nails or wire for cleaning color and vent openings are wholly unnecessary, and if used they are likely to damage the striper beyond repair. Intelligent handling and proper cleaning of the striper will eliminate delays and exasperation, as well as render violent corrective measures unnecessary.

The Powerhouse of them all-

SHARPE

Model 1-N-D
Direct Drive

Why don't you follow the lead of other successful manufacturers and refinishers and learn how you can reduce finishing costs with the most practical portable spray machine manufactured. Our long experience in the manufacturing of portable spray equipment has given us valuable knowledge concerning the short cuts in finishing and refinishing of all products.

This information is available to you. Why not write for further details on this veteran spray machine that has stood the test of time. Light in weight, yet it delivers the maximum of power. Equipped with a spray gun that gives fast coverage and fine atomization.

THE SHARPE MANUFACTURING CO.

1356 So. Flower St., LOS ANGELES, CALIF.

San Francisco Chicago

Write for the name of your nearest jobber or dealer

Superior Galvannealed PATENTED PROCESS

"Superior Super-Metal" PATENTED PROCESS

Two RUST-RESISTING Steel Sheets Coated with Spelter (Zinc) and Heat-Treated after being Coated. Have Etched Surfaces to which Finishes Adhere Firmly.

Sample and Booklet on Request

The SUPERIOR SHEET STEEL COMPANY

CANTON, OHIO

Division of Continental Steel Corporation — General Offices, Kokomo, Indiana
Plants at — Kokomo, Indianapolis, Canton.

Manufacturers of: Black, Galvanized, Long-Terne and Special Coated Sheets, Roofing and Kindred Products; Billets, Rods, Wire, Nails and all types of Fence. (133)

SILK SCREEN PLATES

FOR printing designs and lettering on any flat surface. Any size, style, color or number of colors. No ties in any portion of design. Pictorial, Floral, Lettered, Marble and other effects on Cabinets, Beds, Tables, Chairs, Toys, Wagons, Etc.

Attractive Economical
Fast Efficient

Write for Information

NAZ-DAR COMPANY
4014-22 N. Rockwell St. Chicago, U. S. A.
Manufacturers of Silk Screen Process Paste Paints, Equipment and Supplies

The Cincinnati Varnish Co., Inc.
[Established 1865]
Division of The Foy Paint Co.
Cincinnati, Ohio
Manufacturers of
DEPENDABLE INDUSTRIAL FINISHES
Varnishes • Paints • Enamels
Japans • Stains • Lacquers
Special Finishes
OUR PRICES WILL INTEREST YOU

Maintenance Painting

The interior painting of factories has a double interest to the modern finisher. One of these is the proper painting of his own plant—for if anyone knows the value of proper maintenance along this particular line, it is he. Then there is the prospect of painting other plants in dull times. In most places there is a large potential business along this line which might be easily worked up and retained, provided one used only such materials as have been proved satisfactory for this purpose. There is no more excuse for using so-called "cheap" paint here than elsewhere, if one is to obtain a really permanent job. —J. E. Hyler.

"The Consulting Chemist and Your Business"

"The Consulting Chemist and Your Business" is the title of a new and interesting booklet recently issued by Foster D. Snell, Inc. The booklet, 6½x9½-in. in size, printed on coated paper stock, outlines the nature of the services rendered by the company. Copies will be mailed free to any interested party upon request to Foster D. Snell, Inc., 130 Clinton St., Brooklyn, N. Y.

Hilo Elects Officers

At the Annual Meeting of the Directors of Hilo Varnish Corp., Brooklyn, N. Y., held on Thursday, Jan. 14, Mr. J. H. Schumann, was elected Chairman of the Board. Mr. Schumann served as president since 1910.

Mr. Carl J. Schumann, former secretary, was elected president. Mr. Schumann entered the business in 1905, as assistant factory manager and gained practical, first-hand experience in every department of the company. He brings to his new office all the capabilities of a mind trained in engineering and organization work, plus an intimate knowledge of finance.

Mr. Everitt J. Cole, was elected secretary. Albin G. Schumann, vice president, John H. Mills, vice president, Frank M. Schumann, treasurer, were re-elected.

Letters

Salesmen; Samples; Schedules

Articles on the asking and acceptance of samples of finishing materials, that appeared in recent issues of INDUSTRIAL FINISHING, have been of interest to me, and I am inclined to stick my oar in and tell the world at large just how I feel about it personally.

When a salesman calls on me I do not regard him as just another salesman, but as a man who can probably help me cut down my finishing cost without cheapening our product. I hold this attitude towards all salesmen and give each one an equal break, but I find most of them know very little about the product they are trying to sell, and even less about the application of their product, as regards my particular finishing problems.

Out of 25 salesmen who called on me recently, only one was able to step into our finishing room and work out a schedule that was satisfactory and that cut finishing cost 15%. My hat is off to that salesman and I consider him an asset to his company as well as to the trade he calls on. The other 24 salesmen offered to send me samples, but *could not promise to send me a finishing schedule* with their samples, so I did not accept their offer.

Now if these 24 salesmen had asked me to send a sample of our line to their factory or laboratory and give them a chance to work out a schedule for my approval I would have been quite willing to have done so, as I am a firm believer that clean competition is the life of trade—but this, the one bet, they all overlooked.

These so-called salesmen—with their rank stories and their gift of gab regarding the topics of the day, plus a tremendous lack of knowledge of the product they are trying to sell, and of modern finishing standards—are a detriment to their employers and the trade in general. The salesman who is also a finishing and production engineer and who can point out and prove to me the weak spots in my finishing room and who can step in and show me how to overcome or eliminate them is the man I shall most certainly give my finishing material business to, and such a man does not have to misrepresent his product, and I can rely on him to put me right whenever I strike a snag.

To be a salesman today one must be more than just another salesman or a sample giver; one must be an expert in the application of the line he is selling and be able to figure the time and material cost on any job we might ask him to work out a schedule on, as well as to be able to check up and tell us what is wrong when we have trouble while following a schedule laid down by him. There are too few of this kind of salesman and too many of the other kind, and the sooner we stop accepting samples without a set schedule for the use of such samples, the sooner the manufacturers of finishing products will be able to weed out the undesirable salemen and replace them with men who are, or will become experts in finishing problems and an asset to their house and the trade in general.—John Shearer.

Finishes in Japan

We are very much thank you for every useful issues of INDUSTRIAL FINISHING. We have the honour to inform you that Japan is recently developing in the lacquer industries. At present there are about 30 lacquer makers in Japan. Some of their products by name are Cellva, Cellnish, Chita lacquer, Nippon lacquer, Asaki lacquer.

An annual output of lacquer in Japan is estimated at from 600,000 to 700,000 gallons valued at below 1,000,000 yen. As we learned, lacquer's tariff-reform movements are going on from present duty 25c to 30c.

Solvents: Home made solvents such as butyl alcohol and butyl acetate are also steadily developing owing to increases in lacquer making. Solvents' tariff is also contemplating a raise from present duty of 25c to 30c.

Application: A larger consumption of lacquer is for finishing tram cars, but its use is steadily developing for house furniture and small things.

Handy brushing lacquers are also

— RICHELIEU —
PEARL ESSENCE
featured
on many bodies
at the
AUTOMOBILE SHOW

steadily increasing. Beautifully designed trays are sprayed by some technical experts. If you want we will send to you for applications.

Japan is a very hopeful market for solvents and plasticizers if their qualities be good and the prices are moderate, notwithstanding high tariff or exchange rate. New solvents, plasticizers and spray outfits can be introduced into our market if the makers desire it.—R. Sekido, President, The Nippon Celluloid Jihosha, Tomio, Nara-Osaka Line, Japan.

Lint from Overalls

Some time I would like to see in INDUSTRIAL FINISHING an article in regard to non-lint bearing overalls. This objection in the general run of finishers' overalls causes us no end of trouble, as the body action when using a spray gun often causes friction of the goods, thus throwing off lint to be pulled over finished work by the exhaust fans. We have tried starch and various sealers without very great success.

This may seem a trivial matter but it is rather a disappointment to have an otherwise smooth surface flecked with lint which causes the enamel to draw up to it and form what we call "nibs."

I would like very much to have you give this your attention as I think it would be of great help to the profession.—Jack McCormick.

Likes Stain-Filler

I have just tried out a combination stain-filler which stains and fills in the same operation without raising the grain on mahogany or walnut. This material has been the means of eliminating sanding between coats of stain. I think this material is what a good many finishers have been looking for and hope you may be able to pass this information along to anyone who is interested.—Fred H. Morse.

Paasche Air Finishing Engineer in Massachusetts

Mr. Herman A. Bartholomael is the new Paasche air finishing engineer to serve users of their equipment in Eastern New York and Western Mass., according to a recent announcement from the Paasche Airbrush Co., 1921 Diversey Pkwy., Chicago. Mr. Bartholomael is a capable air finishing engineer. He will make his headquarters at Pittsfield, Mass., and service all Paasche users in that territory.

Color Card Expert Honored

Mrs. Grace MacKenzie, head of The Sherwin-Williams Co. Color Card Division, Cleveland, Ohio, was honored at a banquet tendered her on the night of January 28, 1932, upon the completion of 25 years' service.

Mr. H. D. Whittlesey, vice-president and general sales manager, on behalf of the company presented her with a beautiful wrist watch and certificate officially inducting her into The Sherwin-Williams Long Service Club, of which there are over 190 members, each of whom have served the Company for 25 or more years. In addition to the timepiece, several valuable gifts from her friends were presented to Mrs. MacKenzie.

During her quarter century service as head of the Color Card Division of The Sherwin-Williams Co., she has supervised the sampling of and has personally inspected over 80,000,000 color cards.

"You'll never find a color chip loose or crooked on an S-W Color Card" is her boast.

NORMA PEARL
Finishing Lacquer
Today's Newest, Richest
Most Brilliant Finish
Order Sample Gallon at Drum Prices
NORMAN VARNISH CO.
Lacquers—Varnishes—Enamels
219-47th St. Brooklyn, N. Y.

Pioneer Builders
Of Air Heaters
NICHOLS PRODUCTS
CORPORATION
12953 Greeley Ave., Detroit
122 East 42nd Street New York
DIVISION OF ROSS INDUSTRIES, CORP.

Aluminum Paint

When the product being finished is to be used inside, or where it will not be exposed to the weather; that is one thing. But where the product is such that it will be exposed to sun, wind and rain, or perchance to smoke and fumes; that is something else again. Ordinary paint films break down under such conditions, and must be quickly renewed. On considerable of this type of work, powdered aluminum is being used as a pigment. The pigment is in the form of tiny flakes which assume a flat position upon the work surface, overlapping something like fish scales. This kind of powder can be mixed with a suitable vehicle made by any reputable paint manufacturer.—H. J. E.

MONOGRAMS. A decorative and identification feature useful to many finishers and refinishers is a set of gold leaf Old English letters outlined with a black japan stripe for use as a customer's initials on his automobile, camera, golf club bag, traveling bag, etc. They are put on like decalcomanias.

Chas. B. Chrystal Co. Moves

The Charles B. Chrystal Co., Inc., whose offices were at 11 Cliff St., (Cor. John St.) for over 20 years has moved to 11 Park Place (near Broadway) New York City. The building at 11 Cliff St., is to be torn down in the spring to make room for a larger building.

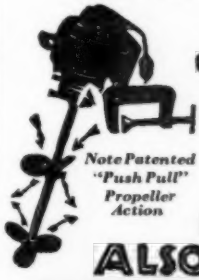
Geo. E. Watson's New Catalog

Geo. E. Watson Co. (painter's and finisher's supplies), 164 W. Lake St., Chicago, Ill., is now mailing their Catalog No. 55. This catalog contains 144 pages, 6¾x10-in.; it profusely illustrates the complete Watson line, lists prices, and is conveniently indexed.

Hy-Speed

EXPLOSION-PROOF ELECTRIC MIXERS

Clamp to *any* tank and mix *all* liquids



MIX QUICKER

COST LESS

LAST LONGER

ALSOP ENGINEERING CO.

39 West 60th St. New York

MODERN FURNITURE FINISHING

A thoroughly practical book in five parts.

I. Period Furniture and modern styles.

II. Furniture Decoration (Antique Shading, Glazing, etc.)

III. Furniture Finishing (Woods, Finishing Room Tools, Equipment, Materials, etc.)

IV. Furniture Patching.

V. Special Processes (Lamp Shades and Bases, Picture Frames, Japanning, Mirror Resilvering, etc.)

543 Pages—Fully Illustrated
Good Binding — Price $5.00
Remittance with order

PRACTICAL PUBLICATIONS INC.

802 Wuslin Bldg. Indianapolis, Ind.

Industrial Finishing
MAGAZINE

Issued fifteenth of each month. Distributed exclusively to executives and foremen finishers in all kinds of industrial plants where finish coats are applied.

PRACTICAL PUBLICATIONS, Inc.
Publishers

Office; 802 Wulsin Bldg., Indianapolis, Ind. Telephone, Riley 6771. President, A. T. Gaumer; Vice-President and Managing Editor, W. H. Rohr; Secretary, R. E. Suits; Treasurer, E. A. Dosch.

Subscription rates, $2.00 per year in U. S. and possessions; $3.00 per year in Canada and other foreign countries.

Advertising rates on application.

EDITORIAL

Car Interior Luxury

Referring to the automobile salon held in New York City in December where the best that America and Europe could produce in high-priced motor transportation was shown, one of our New York correspondents says:

"All were custom-made cars. The charm of the drawing room has been extended to car interiors. This is observed in the upholstery, decorations and trimmings. There is an aim toward complete furnishing of interiors, following in part the European mode for wainscot paneling and the use of ivory and rare wood inlays on doors and partitions. In one design, the modernistic motif is carried through on the seats and sidewalls and extended to the hardware pattern. Another design showed hardware finished in frosted effect which had the added charm of blending with the various furnishings. Some cars were upholstered in genuine leather—one of which, an American car, was in special undyed ivory leather imported from Germany."

Color's Effect on the Mind

On the subject of color in industry one of INDUSTRIAL FINISHING's readers, assuming the role of a typical window shopper, cites his reaction upon seeing a modern display of modern color-finished articles. He says:

"Somehow color has a very strong physiological effect on the mind. The other day I stood before the window of an electrical store and saw, displayed in one of the windows, a large board finished in black on which were displayed a fine line of new electrical fixtures, every one finished in color. Some were in blue, others in shell pink, some in orange, green, white and so forth. That display held my rapt attention for several minutes, and while this happened some few weeks ago, that board with its display of fixtures comes to my mind almost every day. It simply goes to show the effect of color on the human mind, and the lasting impression that is left by the proper use of color."

Keep the Man Efficient

Mr. Fred Mannhardt, practical finisher, who has written several articles for INDUSTRIAL FINISHING brings up an interesting point in connection with attaining real efficiency in the modern finishing department—efficiency here meaning economical production and satisfactory workmanship under

various conditions. Mr. Mannhardt asks:

"Has it ever occurred to you that the most efficient equipment in your place of business today is a good man?

"A sick man on the job is worse than a sick machine, for in spite of all that has been said about efficiency, new ways of doing jobs, beautiful effects to be obtained by using certain materials, etc., to what avail is it if a man is physically, and hence mentally, unfit for the task in hand. It is of vital importance then to see that all safety precautions are taken. Much of such matter is disclosed on factory inspection bulletins, but not enough attention is paid to it. Periodical talks on these things in any factory would be a good thing. A little more personal cleanliness, a little less inhalation of fumes, a little better ventilation, wearing correct glasses, etc.—all these things contribute toward placing the efficiency part where it should be.

"It is well for a finisher to change all his clothes at the end of the day. In some plants shower baths are provided, which is a good thing. These are just a few of the main things to look out for. A close study of individual needs in this respect will help make that word *efficient* look a little more *efficient*."

DECALCOMANIA ON FABRIC. For applying decalcomanias (transfer pictures) onto fabrics there is available a "cloth-fix" adhesive which, applied on a transfer picture with a hot iron, permanently transfers the picture onto the material.

PAISPEARL

The Standard of Quality

A Genuine Pearl Essence

Made by our patented processes which insure ***constant uniformity*** of ***concentration, color*** and ***luster***—and satisfying results.

"PAISPEARL" is supplied to all leaders of industry in Europe and America where that "beautiful pearl finish" is desired.

Many prominent cars are now coming through in PAISPEARL finishes.

PAISPEARL PRODUCTS, INC.

65 Nassau St. New York, N. Y.

Prompt deliveries on any quantity

Classified Advertising

Advertisements under this heading 45 cents a line per insertion, minimum charge, $1.35. In estimating, calculate six words to one line, and add one additional line for heading. Use this department to obtain help, find positions, buy and sell equipment, dispose of manufacturing properties, etc.

FINISHING FOREMAN

Desires position: several years' experience on high grade store, office and bank fixtures, antique and novelty furniture. Understands modern methods and production, matching colors and finishes. Can handle any number of men. Go anywhere. Address IF-421, care Industrial Finishing.

SALESMAN INDUSTRIAL FINISHES

Twelve years' experience in New York City and adjacent territory selling lacquers, oil, enamels, paint, varnish, also solvents. Knows all large industrial uses of above products. Address IF-420, care Industrial Finishing.

WANTED FOR NEW ENGLAND TERRITORY

Line of industrial lacquers, sealers, shellacs, enamels, stains and specialties for the finishing room. Twenty years on this territory. Best of references. Address IF-419, care Industrial Finishing.

EXECUTIVE POSITION WANTED

By a man of several years' experience in the manufacture of lacquers and lacquer enamels for the automobile and furniture trade. Expert on colors and finishes. Capable of taking full charge of production. Able to formulate to meet the demand. Address IF-417, care Industrial Finishing.

LACQUER CHEMIST WANTED

Must have actual experience in research, formulating and production. To take full charge of established progressive lacquer factory in vicinity of metropolitan New York. Give full particulars. Write IF-100, care Industrial Finishing, 254 W. 31st st., New York.

NEW YORK TERRITORY REPRESENTATIVE DESIRED

Western manufacturer desires commission representative New York territory for Industrial Color Finishes and Retail Line of Specialties. When writing, give details of experience and name present lines which must be non-competitive. Address IF-418, care Industrial Finishing.

Furniture Styles; Walnut

For the purpose of stimulating the steadily increasing interest in American Walnut, a series of attractive brochures to give manufacturers, designers and dealers interesting information regarding walnut and its use in certain important furniture styles has been prepared by the American Walnut Mfrs. Assn.

Other factual information in regard to the trend of woods used in furniture and interiors (a result of careful surveys) is graphically set forth in one of these folders in anticipation of assisting the manufacturer and dealer in developing their manufacturing and selling plans.

These brochures, which are the result of careful study and extensive research, are typical of authentic, advance information that the American Walnut Mfrs. Assn., 616 S. Mich. Blvd., Chicago, is in a position to supply regularly.

Industrial Service Organization

A new type of service organization, to facilitate the marketing of industrial products, has been formed by Dr. H. H. Sheldon, H. A. Morse, L. W. Hutchins, and Dr. W. H. Easton, all well known in many branches of industry, engineering and science. The company, with offices at 191 W. 10th St., New York City, will be known as Sheldon, Morse, Hutchins & Easton.

This group plans to furnish manufacturers with a complete sales research, advertising, and publicity service, based on their experience in the promotion and sales of chemicals, electrical equipment, building materials, industrial and marine supplies and machinery, scientific apparatus, and other lines.

Among the services rendered are: the determination of markets, evaluated for consumption and profit; the determination of salesmen's needs; the organization of sales record systems; the planning and execution of magazine and direct-mail advertising; patent surveys; and the preparation of manufacturers' exhibits, etc.